

EPA & NEVADA: EUREKA SMELTERS SITE EUREKA, NV





EUREKA SMELTERS SITE

History

- Within the Ruby Hill Mining District, produced silver and lead
- Eureka had up to 16 Smelters and Mills operating from 1860 to 1920's
- Caused widespread Lead and Arsenic contamination which was unknown until 2012
- Lead and Arsenic were released in stack emissions and general loss from the milling process



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Cleanup To Date

- Eureka population: approximately 700
- 400 total parcels, EPA has sampled roughly 250 parcels
- EPA has cleaned up 43 residences and a portion of the Elementary School
- EPA has spent or committed \$5.05 million to date
- Residential property clean up:
 - Requires removing the top 1 foot of soil, placing indicator tape, and backfilling with clean soil
 - Landscaping is returned to prior conditions



Lead, Arsenic and Children

- Approximately 1/4 of residences cleaned to date have children living in them or regularly visiting
- Child blood lead data in Eureka is limited, but at least 2 homes cleaned so far have had children with elevated blood lead
- Lead causes irreversible neurologic damage (especially to children under the age of 6) and arsenic is a known human carcinogen
- The highest lead soil concentration found so far is 100,000 parts per million (ppm) equal to 10% by weight, the clean up standard for lead is 425 ppm
- The highest arsenic soil concentration found so far is 38,000 ppm, the soil clean up standard for arsenic is 60





Residential Yard Cleanups

Tier	Lead Concentration, ppm	Arsenic Concentration, ppm	Remaining Homes
I	>3000	>600	50
II	1275-3000	326-600	120
III	425-1275	234-326	57

In 2013 and 2014 EPA cleaned up 43 out of a total of 93 Tier I homes



Engineering Evaluation and Cost Analysis (EE/CA) for full Cleanup

- Estimated \$28 million for full clean up, which includes:
 - 227 Residences & Repository (~\$21 million)
 - 4 Vacant Mill Sites/Hillsides (~\$4.2 million, 20.6 acres)
 - 4 Slag Piles (~\$3.5 million, 6.4 acres)



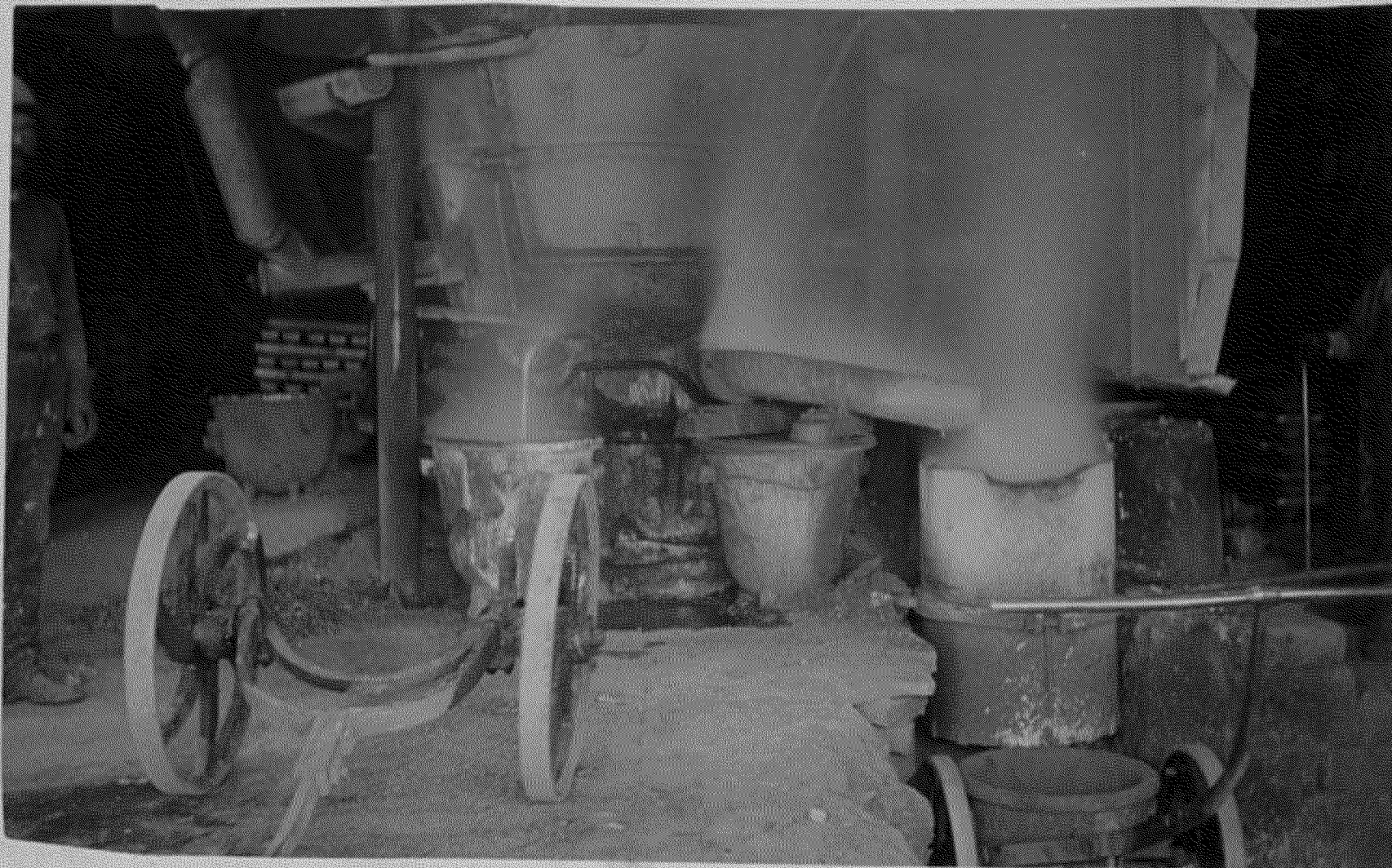
Funding

- **Fully funded** schedule for complete clean up would require \$7 million per year for 4 years
- **Minimum funding** for **work in 2016** is \$3.5 million
 - » \$1.1 million has already been allocated by EPA
- \$3.5 million will provide:
 - » Clean up of 35 homes
 - » construction of the repository
 - » covering of the hillside/mill site in the middle of town with 100,000 ppm lead and 38,000 ppm arsenic



Funding 2017

- **Minimum funding for work in 2017 is \$4.5 million**
- \$4.5 Million will provide:
 - » 50 residential clean ups
 - » Clean up of 2 hillsides
- Due to the high cost of mobilizing to Eureka, costs may be higher if work is conducted over a longer period of time.



LOUIS MONACO, Photo.

Eureka, Nev.

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